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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/380,864	12/02/1999	MARTYN VINCENT TWIGG	JMYT-V00200	3166
23122	7590	08/25/2004	EXAMINER	
RATNERPRESTIA			LEUNG, JENNIFER A	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	

1764

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 09/380,864	Applicant(s) TWIGG, MARTYN VINCENT	
	Examiner Jennifer A. Leung	Art Unit 1764	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 02 August 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 9-12, 14-16, 18, 21-30, 32, 34 and 35.

Claim(s) withdrawn from consideration: none.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Hiem Tran
HIEM TRAN
PRIMARY EXAMINER

CONTINUATION OF ITEM 5.

The request for consideration has been considered, but it does not place the application in condition for allowance, for the same reasons set forth in the Final Office Action. Applicant further submits the following arguments:

Beginning on page 8, Item 1, Applicant argues,

“Tsuchitani et al. is directed to providing a method which is capable of efficiently removing NO_x from gas in an oxidizing atmosphere with an oxidizing component, an absorbing component, and an auxiliary component... Tsuchitani et al. teaches using a NO_x trap, not a lean NO_x catalyst.

In fact, Tsuchitani et al. dismisses (and therefore distinguishes) lean NO_x catalysis in favor of absorbing NO_x on a NO_x absorber (lithium, potassium etc.) in lean conditions, i.e. in the absence of reductant, and then intermittently regenerating the NO_x absorber by contacting it with a reductant.”

The Examiner respectfully disagrees. As is well known in the art, a NO_x trap comprises an absorbent for “taking in” NO_x, as through the pores or interstices of the absorbent material. In contrast, Tsuchitani et al. discloses a catalyst comprising components such as alkali metals (i.e., lithium, potassium etc.) and/or alkaline earth metals (i.e., magnesium, calcium etc.), which are utilized as components for adsorbing/accumulating the oxidized NO_x on the surface of the catalyst, prior to conducting a surface reaction of the NO_x with the reducing agent under a reducing atmosphere. (see page 8, lines 10-21). Applicant has argued an “absorbent”, whereas Tsuchitani et al. discloses an “adsorbent”.

Furthermore, the Examiner submits that Applicant’s arguments are not commensurate with his own disclosure. For instance, it is unclear as to how the lean NO_x catalyst as claimed by Applicant differs from the catalyst of Tsuchitani et al., given that both catalysts may comprise

an adsorbing component, in the form of an alkaline earth metal compound (also note instant claims 12 and 24). Additionally, Applicant currently argues against providing an absorbent component to the lean NOx catalyst, whereas the current specification clearly recites that an absorbent, such as a zeolite, may be optionally provided. Referring to page 2, lines 19+, Applicant's disclosure states,

“The first catalyst system may be, for example, a relatively low loading of catalytically active component on a substrate, *optionally in combination with components that can retain NOx and/or reducing species, such as zeolite or like absorbents, or alkaline earth metal compounds.*”

Beginning on page 9, Item 2, Applicants argue,

“The applicant respectfully submits that the Office Action has mischaracterized the citation of Tsuchitani et al.

The paragraph of page 7, lines 47-55 refers to a “catalyst” without mention of its oxidizing or reducing capabilities... Because element a) of claim 9 of the present invention is directed to a platinum catalyst for reducing NOx and the citation of Tsuchitani et al. discusses a platinum *oxidation* catalyst, the applicant submits that this citation of Tsuchitani et al. is in error.”

The Examiner respectfully disagrees. As further explained on page 7, line 56, to page 8, line 9, Tsuchitani et al. discloses that with respect to said “catalyst”,

“... such noble metals as platinum, palladium, rhodium, and ruthenium, particularly platinum and/or palladium, are effective in oxidizing NOx in an oxidizing atmosphere. These noble metal *function to reduce and decompose NOx in the presence of a reducing substance or in a reducing atmosphere besides functioning to oxidize NOx in an oxidizing atmosphere.*”

Thus, Tsuchitani discloses that the catalyst is capable of both oxidizing or reducing NOx, depending on whether the catalyst is subjected to an oxidizing or reducing atmosphere.

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Please also note that a recitation of the intended use of the claimed invention must result in a *structural difference* between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In this case, claim 9, section a) recites,

“a lean NO_x catalyst system comprising a lean NO_x catalyst platinum group metal (PGM) for reducing NO_x to N₂ wherein the lean NO_x catalyst PGM consists of platinum;”

According to claim analysis, the scope of section a) merely includes a catalyst system comprising a platinum group metal, wherein the PGM must consist of platinum. The modifiers “lean NO_x” and “lean NO_x catalyst” provide no added structure to the catalyst system, as they merely indicate the intended use of the PGM, platinum, for reducing NO_x.

Beginning on page 9, Item 3, Applicants argue,

“The applicant respectfully submits that the Office Action has again mischaracterized the citation of Tsuchitani et al. There is no disclosure in the cited passage of Tsuchitani et al. that the oxidation catalyst oxidizes hydrocarbons and carbon monoxide as recited in element b) of claim 9). Nor, is there disclosure in the cited passage that a lean NO_x catalyst system is disposed downstream of an oxidation catalyst.”

The Examiner respectfully disagrees. As referenced in the prior Office Action, page 9, lines 38-44, Tsuchitani et al. discloses,

“When the exhaust gas under treatment contains hydrocarbons, carbon monoxide, etc. at high concentrations, the catalyst mentioned above may be used in combination with an oxidizing catalyst or a three-way catalyst. In this case, *the catalyst described above may be disposed in the leading stage and the oxidizing catalyst or three-way catalyst in the trailing stage relative to the inlet for the exhaust gas.*

See also page 4, lines 36-44, for a description of the two-stage embodiment. The high concentration of hydrocarbons and carbon monoxide inherently results from the injection of a reducing agent (see page 5, lines 31-41) at a position upstream of the leading stage. It is further well known in the art that oxidation catalysts, such as platinum and/or palladium (see page 9, line 55 to page 10, line 19), are capable of performing the intended use of oxidizing hydrocarbons and carbon monoxide. Please also note that a recitation of the intended use of the claimed invention must result in a *structural difference* between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In this case, claim 9, section b) recites,

“an oxidation catalyst system comprising an oxidation catalyst platinum group metal (PGM) for oxidizing hydrocarbons and carbon monoxide;”

According to claim analysis, the scope of section b) merely includes a catalyst system comprising any platinum group metal. The modifier “oxidation catalyst” provides no added structure to the catalyst system, as it merely indicates the intended use for the platinum group metal for oxidizing hydrocarbons and carbon monoxide.

Regarding the arguments made with respect to the location of the lean NO_x catalyst system *downstream* of the oxidation catalyst, please note that claim 9 currently recites the lean NO_x catalyst being placed *upstream* of the oxidation catalyst. Thus, Applicant’s argument is rendered moot.


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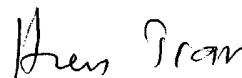
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Leung
August 23, 2004 



**HIEN TRAN
PRIMARY EXAMINER**